

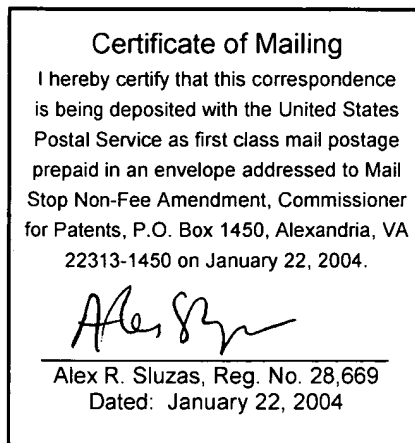
3679

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent
appln. of: Albert J. FRATTAROLA

Serial No.: 09/803,221
Filed: March 9, 2001
For: **FLOATING CAPTIVE SCREW**
Grp. Art Unit: 3679
Examiner: Flemming Saether
Atty. Dkt.: 61-01



Mail Stop Non-Fee Amendment
Commissioner for Patents
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Alexandria, VA 22313-1450

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GROUP 3600

Sir:


Enclosed herewith please find the following documents for filing in the United States Patent and Trademark Office:

1. This transmittal sheet in duplicate;
2. Response; and
3. Acknowledgment postcard to be date-stamped and returned to Paul & Paul.

The Commissioner is hereby authorized to charge any additional fees associated with this communication, or credit any overpayment, to Paul & Paul Deposit Account No. 16-0750, Order No. 2025.

Respectfully submitted

January 22, 2004


Alex R. Sluzas
Reg. No. 28,669

Order No. 2025

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Alex R. Sluzas

Alex R. Sluzas, Reg. No. 28,669
Dated: January 22, 2004

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RESPONSE

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Sir:

This response is being submitted under certificate of mailing on Thursday, January 22, 2003 in response to the Examiner's Action mailed October 22, 2003 in the above-referenced patent application setting a three-month shortened statutory period for response.

Applicant gratefully notes that the Examiner has withdrawn the non-final rejections entered pursuant to 35 U.S.C. 103(a) in the Examiner's Action mailed April 23, 2003 in view of the Rule 131 declaration filed in this matter.

Claim 1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,462,395 ("Damm") in view of U.S. Patent 3,465,803 ("Ernest"). This rejection is respectfully traversed, and reconsideration and withdrawal of the rejection are respectfully requested.

The Examiner states that Damm discloses a captive screw comprising a ferrule (3) and a screw (2) including a head (4), a shank (8), a thread (10) and a collar (13) (referring also

to Figure 8) formed on the shank proximate the thread. The Examiner contends that the screw is captive on the ferrule between the head and the collar. The Examiner acknowledges that Damm does not include a spring. However, the Examiner states that Ernest discloses a captive screw including a spring (50) extending between a head (38) and a ferrule (10) and teaches that to provide a spring is known in the art by virtue of the disclosure of embodiments both with (Figs. 1-12) and without (Figs. 13-15) a spring. The Examiner concludes that at the time the invention was made, it would have been obvious for one of ordinary skill in the art to provide the captive screw of Damm with a spring between the head a ferrule as disclosed in Ernest because Ernest teaches that it is well known to provide a spring to an otherwise unsprung captive screw. The Examiner explains that in this combination, the spring would be operative to retract the screw facilitating installation.

Applicant respectfully submits that the Examiner's conclusion is not correct.

First, applicant respectfully disputes the Examiner's characterization of Damm. Damm discloses a "sound decoupling connecting element" for connecting two elements with a gasket in between, especially for connecting a cylinder head cover to a cylinder head (col. 1, lines 6-9). Damm does not disclose a captive screw, as that term is understood in the art. Although the Examiner states that the sound decoupling connecting element includes a "ferrule" (3), Damm discloses that the connecting element 1 includes a screw 2 made of metal and a "formed body 3 made of an elastomer material, especially rubber" (col. 6, lines 48-50).

Applicant's independent claim 1 requires "a shank adapted to pass through the ferrule." Damm's connecting elements 1 do not meet this limitation. In each of the disclosed embodiments Damm's the shaft 2 passes into the formed body 3 when the screw 2 is tightened so that the screw threads 11 engage the counter threads 34 in the second part 28

(compare Figures 1 and 2). However, the shaft 2 cannot pass through the formed body 3 if the sound-insulating function of the connecting elements 1 is to be preserved. If the shaft 2 passed through the formed body 3, the formed body 3 would not engage and be compressed between the first part 27 and the second part 28 when the support area 14 of the swelling 13 contacted the surface 36 of the second part 28, thereby limiting further axial travel of the screw 3. Consequently, the combination proposed by the Examiner does not meet all the limitations of claim 1, and no *prima facie* case of obviousness is established thereby.

With respect to Ernest, applicant respectfully contests the Examiner's assertion that Ernest teaches that to provide a spring is known because Ernest discloses both embodiments with a spring (Figs. 1-12) and without a spring (Figs. 13-15). In order to provide a spring in Ernest's springless embodiments, the structure of the screw must be significantly modified, as in the springless embodiments, "the coil spring is omitted and the retainer is correspondingly shortened" (col. 5, lines 22-25).

Applicant respectfully asserts that one of ordinary skill in the art would not be motivated by Ernest to add a spring to the connecting element of Damm since the provision of such a spring would defeat Damm's purpose of allowing premounting of one or both parts with inclusion of a gasket and simplifying assembly. If a spring were added as suggested by the Examiner between the head and the formed body, the screw 3 would be biased outward, and an important function of the least one friction area pairing 22, "ensur[ing] that the screw can be brought or pushed into any intermediate position of it limited axial lift relative to the formed body and that it keeps this position after being let go" (col. 3, lines 52-56), would be lost. The spring would simply push the screw back out of the formed body, assuming the frictional force of the friction area pairing is overcome. Conversely, if the spring were not strong enough to do

so, the proposed spring would be a completely nonfunctional feature. Consequently, there is nothing in either of the cited references, nor in the proposed combination, that would render the presently claimed invention obvious to one of ordinary skill in the art.

Reconsideration and withdrawal of the rejection entered under 35 U.S.C. 103(a) of claim 1 over Damm in view of Ernest are respectfully requested for these reasons.

Claim 1 stands alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Ernest in view of Damm. This rejection is also respectfully traversed, and reconsideration and withdrawal of the rejection are also respectfully requested.

The Examiner states that Ernest discloses a captive screw comprising a ferrule (10); a screw having a head (38), shank (44), threads (36) and collar (56); and a spring (50). The Examiner notes that the screw is captured in the ferrule. The Examiner contends that Damm discloses a captive screw wherein the collar (13) (also referencing Fig. 8) is formed on the shank.

The Examiner concludes that in view of Damm's disclosure, it would be obvious for one of ordinary skill in the art at the time the invention was made; to have the collar of "Barry" (Damm?) "formed on" the shank.

The Examiner asserts that the collar being formed on the shank would facilitate assembly of the screw in the ferrule since the screw collar would simply have to be press fit through the reduced diameter portion of the ferrule. The Examiner also asserts that, as in Damm the collar would operate as a standoff to engage a surface of a panel to limit penetration.

Applicant respectfully argues that the Examiner's conclusion is incorrect.

There is simply nothing in either reference, nor in the combination of the references, that would motivate one of ordinary skill in the art to make the combination suggested by the Examiner.

As noted above, Damm does not disclose a captive screw, but rather a sound decoupling connecting element.

The shaft of Damm's screw 3 is sized so that the gasket is compressed between the first part and the second part as the screw is tightened into the end-mounted position. If a gasket and/or an elastomeric formed body are not used, the motivation for providing a collar on the shaft is lost. Ernest's captive screw does not include a collar, and Ernest's captive screw is employed to screw together a pair of plates (Fig. 1). Although the Examiner suggests adding a collar to Ernest's shaft, he does not indicate where along the shaft he believes one of ordinary skill in the art should add the collar. There are only two possibilities: (1) First, the collar could be added to the shaft so that it did not contact the second panel when the captive screw is fastened. In this case, the collar would have no functional significance whatsoever, and there would be no motivation to add the collar for one of ordinary skill in the art. (2) Second, a collar could be added so that it contacts the second panel before the threads fully engage the threaded nut in the second panel. In this case, the collar would interfere with the tightening of the captive screw, and actually detract from its utility, by operating as a standoff, as recognized by the Examiner. One ordinary skill in the art would not be motivated to make the allegedly obvious modification since nothing good would come of it.

Reconsideration and withdrawal of the rejection entered under 35 U.S.C. 103(a) of claim 1 over Ernest in view of Damm are respectfully requested for these reasons.

Claims 2-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ernest as applied to claim 1 above, and further in view of Aukzemas. This rejection is respectfully traversed, and reconsideration and withdrawal of the rejection are also respectfully requested.

The Examiner states that Aukzemas discloses the particulars of the ferrule. The Examiner notes that the ferrule is disclosed as having a knurled outer surface including a groove (32) and annular lip (generally at 30). The Examiner concludes that at the time the invention was made, it would have been obvious for one of ordinary skill in the art to the exterior of the ferrule of Ernest as disclosed in the Aukzemas in order to improve its attachment to the panel.

The Examiner further states that the ring on the ferrule being bent is a product-by-process limitation wherein it is merely the final product considered for patentability. The Examiner notes that Ernst shows a ring (22).

Applicant respectfully traverses the Examiner's conclusion.

There is nothing in either Ernst or Aukzemas which would disclose or suggest a collar formed on the shank, as required by independent claim 1, from which the presently rejected claims depend. Aukzemas discloses a conventionally threaded screw shank, without a collar, such as is required by applicant's independent claim 1. Each of dependent claims 2-5 ultimately depend from claim 1, and thus each incorporates the limitation of the required collar. Thus, the combination of Ernst and Aukzemas does not make out a *prima facie* case of obviousness, because the combination does not include all the limitations of the rejected claims. Finally, there is nothing in either of the cited references that teaches or suggests that the penetration of the screw into the main frame or panel be limited by the provision of a collar. The screw threads in Aukzemas extends all the way through the second panel 60 when the

screw joins the first and second panels such the two panels are in contact with one another (Fig. 1). Similarly, there is nothing in Ernst to space the first panel 12 from the second panel frame 13 when the screw fastener is fully engaged (Fig. 1).

Reconsideration and withdrawal of the rejection entered under 35 U.S.C. 103(a) of claims 2-5 over the combination of Ernst and Aukzemas are respectfully requested for these reasons.

As the present application is now believed in condition for allowance, early reconsideration and allowance of all claims presently in the application are earnestly solicited.

January 22, 2004

Respectfully submitted,

Order No. 2025



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